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(12) Patent:

(11) CA 730345

(54) METAL SOFFIT

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ABSTRACT:

CLAIMS: [Show all claims](#)

*** Note: Data on abstracts and claims is shown in the official language in which it was submitted.

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This invention relates to a metal soffit for a building structure having an overhanging eave and appertains particularly to one composed of elongated panels with interlocking ends.

An object of the present invention is to provide a vented soffit formed of interlocking panels which may be readily installed on the underside of an overhanging roof structure, the interlocking vented panels permitting free ventilation while barring the entrance of insects, flies and the like.

10 A further object of the invention is to provide an interlocking vented soffit panel with complementary interlocking ends of a nature that substantially conceal the interlocking joint.

Another object of the invention is to provide interlocking vented soffit panels of standard widths and varying stock lengths that are transversely strengthened so that while they are light and durable they will be semi-rigid and will not distort or bend and require to be supported along their front and rear edges only.

20 Another object of the invention is to provide a sectionalized metal soffit having a fascia that serves to support the outer edge of the soffit while giving a desirable finish to the front edge of the roof.

A further object of the invention is to provide a soffit that while vented, transversely reinforced and composed of interlocking panels, presents a smooth, coplanar attractively finished exposed under-surface.

30 A further object of the invention is to provide interlocking invented soffit panels and associated parts such as supporting angles and fascia strips of light metal, synthetic resins or the like that may be factory finished in durable colorings so that they will impart an aesthetic appearance to the soffit eave when completed.



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A still further object of the invention is the provision of an eave soffit of the nature and for the purpose set forth that is characterized by structural simplicity, durability and reasonable cost of production and being capable of easy and rapid installation is thereby rendered commercially desirable.

To the accomplishment of these and related objects as shall become apparent as the description proceeds, the invention resides in the construction, combination and arrangement of parts as shall be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the claims hereunto appended.

The invention will be best understood and can be more clearly described when reference is had to the drawings forming a part of this disclosure wherein like characters indicate like parts throughout the several views.

In the drawings:

Figure 1 is a side elevation of an overhanging roof structure showing the eave closed by a soffit and supported by an angle strip and fascia along the inner and outer edges;

Figure 2 is a longitudinal section of the interlocking soffit panels, showing the lanced slots and the interlocking joints formed by complementary ends of adjacent soffit panels;

Figure 3 shows a portion of one such panel in plan view;

Figure 4 is an enlarged sectional view of the interlocking joint as taken on line 4-4 of Figure 3; and

Figure 5 is a similarly enlarged sectional detail of one of the lanced vents as taken on line 5-5 of Figure 3.

Referring to the drawings, A represents an overhanging roof structure of a building, and B the soffit mounted on the underside or eave of this overhanging roof. The soffit B is composed of a plurality of elongated panels 10 which are provided with one or more transversely extending, inverted, spaced and parallel

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V-shaped grooves 11 rising on the upper side thereof while the remainder of each panel lies in a common plane.

The plane surface of each panel is provided with transversely extending spaced rows of orifices or lanced slots 12, with those in adjacent rows arranged in staggered relation, although they may be arranged in random fashion or other desired pattern.

10 The slots 12 are preferably lanced so that the slots are formed as slits with their side walls 13 and one or both of the end walls 14 tapered upwardly forming constricted openings 15, as clearly shown in Figure 2, and of such a size so that while the slots permit air to freely circulate therethrough they will prevent flies and other insects from passing through the slits. With such a soffit panel a slot area in excess of four square inches to a square foot of soffit is obtainable and this provides sufficient ventilation to allow the usual attic louvres to be dispensed with.

20 The peripheral flanges 13 and 14 of the slots 12 are concealed when the soffit is assembled since these flanges extend above the upper face of the soffit panels yet impart to the panels great strength and rigidity against flexing or bending.

The panels are preformed for standard eave overhang but may be provided in a variety of lengths of from one to twelve feet and provided with various forms of complementary interlocking ends. A suitable joint is obtained by providing one end of each panel with an outwardly facing groove and the opposite end with a tongue 17 so that the abutting ends of adjoining panels are interlocked by tongue and groove joints.

30 A smooth concealed or scarcely noticed joint is obtained by forming the groove on the upper side of the panel with an S

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or reverse curve fold with the two upper layers separated to provide the outwardly facing U 16. The opposite end of the panel is upwardly offset to the level of the U then it too is fashioned with an S or reverse curve, the two lower layers being tightly compressed to provide the tongue 17 to fit in the U 16 and the uppermost fold being spaced thereabove and extending over the joint on the top. This joint provides for connected panels lying in coplanar relation on the lower exposed face with no evidence of the six-fold thickness of the interlocking joint.

10 To install the soffit, the panels 10 are arranged in longitudinal interlocked juxta relation and attached along opposite sides to a horizontal batten on the wall of the building and the inner plate 19 on the end of the rafters by means of suitable fasteners such as nails, staples and the like and their finishing angles 20 may be applied along both edges or the outer plate 21 of the roof may be covered by a fascia 22 which in cross section is shown as channel shaped with the parallel side walls of different heights. The longer outer wall 23 constituting a facing for the outer face of the facing plate 21 while the shorter or inner
20 arm 24 of the channel has an inwardly extending flange 25 which underlies the outer edge of the soffit panels in the same manner as the angle 20 along the inner edge.

The inner and outer edges of the soffit panels 10 rest on the upper faces of the angle bracket 20 and fascia flange 25 that give a finished appearance to the eave of the roof. The soffit B while light in weight is strong and rigid due to the inverted V-shaped grooves 11 and the peripheral flanges of the rows of vented slots 12 so that no sag occurs neither do these soffit panels require any supporting means at the longitudinal media of the assembled soffit.

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Since the light-weight soffit panels come in convenient lengths they can be conveniently handled and manipulated by a single person, the cost of their installation is quite reasonable. Moreover, the pre-cut and durably finished soffit panels, angle brackets and fascia may be readily shipped to outlying points where building construction is being carried on.

10 Though primarily intended for use as a vented soffit for overhanging eaves, this lanced and grooved, plane surface, interlocking metal panel may find useful employment in accoustical ceilings and other such structures.

From the foregoing description taken in connection with the accompanying drawings, it will be manifest that a vented metal soffit is provided that will fulfil all the necessary requirements of such a device, but as many changes could be made in the above description and many apparently widely different embodiments of the invention may be constructed within the scope of the appended claims, without departing from the spirit or scope thereof, it is intended that all matters contained in the said accompanying specification and drawings shall be interpreted as illustrative and not
20 in a limitative or restrictive sense.

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The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. For a building with an overhanging roof, a soffit for the underside of the eave of the roof comprising a plurality of similar interlocking panels arranged in coplanar juxtaposition with adjacent edges interlocking and attached along inner and outer edges of the outer wall of the building and the outer edge of the roof respectively.

2. For a building with an overhanging roof, a soffit for the underside of the eave of the roof comprising a plurality of panels each formed with spaced, transversely extending inverted V-shaped grooves rising on the upper side thereof and presenting a plane surface between adjacent grooves.

3. A soffit according to claim 2 wherein the panels have spaced, transversely extending rows of slits with upwardly extending flanged edges that converge to form constricted openings, the panels being transversely strengthened and rigidified by both said inverted grooves and rows of slits.

4. For a building with an overhanging roof, a soffit for the underside of the eave of the roof comprising a plurality of interlocking panels arranged in juxtaposition and attached along inner and outer edges to the wall of the building and the outer edge of the roof respectively; said panels each formed with spaced, transversely extending inverted V-shaped grooves rising on the upper side thereof and presenting a plane surface between adjacent grooves and having spaced, transversely extending rows of slits with upwardly extending flanged edges that converge to form constricted openings, the panels being transversely strengthened and rigidified by both said inverted grooves and rows of slits, the interlocking ends of said panels having the joint upwardly offset to present a smooth underside, whereby the exposed underside of the panels despite the interlocking joints, the transversely extending upwardly projecting V-shaped grooves and rows of flanged slits, presents a smooth coplanar surface.

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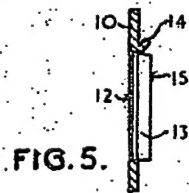
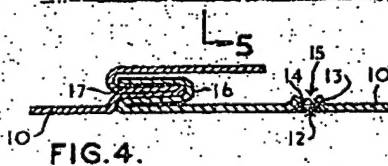
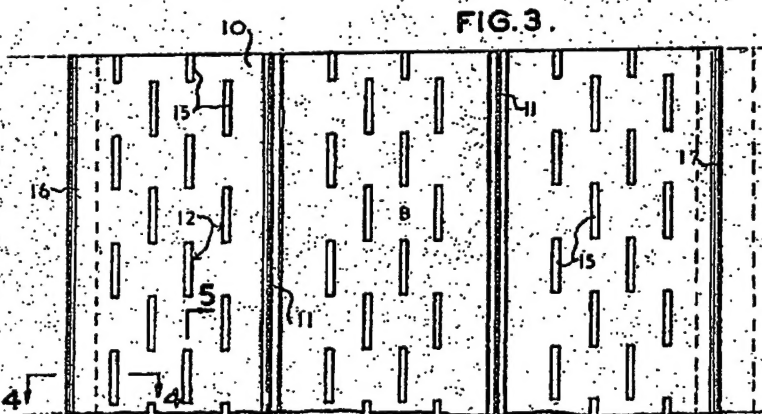
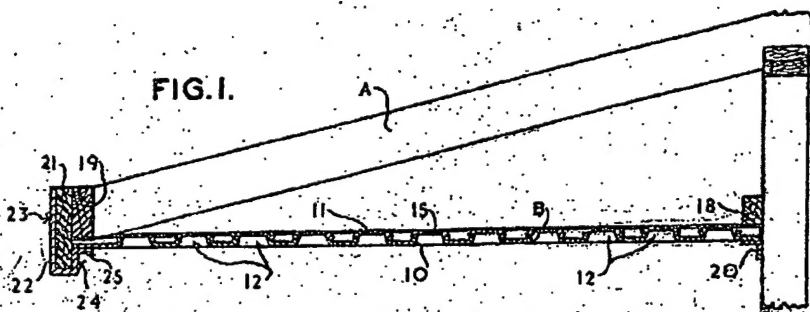
5. A soffit as defined in claim 1, having angle strips underlying the inner and outer edges thereof.

6. A soffit as defined in claim 1, wherein the inner edge has an underlying angle strip and the outer edge has an underlying angle strip that is a part of a fascia covering the outer plate of the roof.

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